1. A method for constructing a first image and a second image of an omnivergent stereo image pair, comprising:

rotating a deflector about a rotation axis, the deflector positioned a distance from the rotation axis and having plural deflection regions;

positioning a receptor proximate to the rotation axis, the receptor comprising a first portion of sensors and a second portion of sensors;

deflecting a first input received at a first deflection region of the deflector to the first portion of sensors;

deflecting a second input received at a second deflection region of the deflector to a second portion of sensors;

determining the first image based at least in part on the first input;

determining the second image based at least in part on the second input; and

determining a first omnivergent stereo pair based at least in part on the first image and the second image.

2. The method of claim 1, further comprising:

wherein both the first image and the second image are omnivergent images.

3. The method of claim 1, further comprising:

selecting a view point; and

rendering a three dimensional imaged based at least in part on the view point and the first omnivergent stereo pair.

4. The method of claim 1, wherein the distance is fixed.

5. The method of claim 1, further comprising:

performing the method at a first location to determine the first omnivergent stereo pair;

performing the method at a second location to determine a second omnivergent stereo pair; and

synthesizing an environment model based at least in part on the first omnivergent stereo pair and the second omnivergent stereo pair.

6. The method of claim 5, wherein the first location is proximate to the second location.

7. The method of claim 5, wherein a first region defined by rotating the deflector about the axis at the first location abuts a second region defined by rotating the deflector about the axis at the second location.

8. The method of claim 1, further comprising:

receiving a configuration input; and

setting the distance with respect to the configuration input.

9. The method of claim 8, wherein the configuration input corresponds to a desired size for a region in which a viewpoint may be selected.

10. The method of claim 9, further comprising:

receiving a viewpoint selection; and

rendering a three dimensional image based on the viewpoint selection and the first and the second image.

11. A method for constructing an omnivergent stereo image pair, comprising:

defining a cylindrical region having an axis of rotation perpendicular to a rotation plane, the cylindrical region defined with respect to an array of sensors disposed parallel to the axis of rotation, and a prism disposed parallel to the vertical array; and

determining an environment about the cylindrical region by rotating the cylindrical region through rotational positions, and while rotating:

receiving a first input at a first face of the prism for a rotational position of the cylindrical region, the first input having a first travel path tangential to the cylindrical region and corresponding to a first portion of the environment, and

receiving a second input at a second face of the prism for the rotational position of the cylindrical region, the second input having a second travel path tangential to the cylindrical region and corresponding to a second portion of the environment.

~~10~~ 12. The method of claim 9, further comprising:

storing the first input and the second input for each of plural rotational positions of the cylindrical region;

selecting a view point within the cylindrical region; and

constructing a convergent stereo image of the environment with respect to the selected view point and the stored first and second inputs for the plural rotational positions of the cylindrical region.

13

~~11~~. The method of claim 9, wherein the first travel path is opposite of the second travel path.

14

12. The method of claim 9, wherein the first and second travel paths are parallel to the rotation plane.

15

~~13~~. An article of manufacture, comprising:

a machine accessible medium having associated data, which when accessed by the machine, results in the machine performing:

rotating a deflector rotably mounted a distance from a rotation axis, the deflector having plural deflection regions for deflecting inputs to a receptor positioned proximate to the rotation axis, the receptor comprising a first portion of sensors and a second portion of sensors;

determining the first image based at least in part on a first input received at a first deflection region of the deflector that is deflected towards the receptor;

determining the second image based at least in part on a second input received at a second deflection region of the deflector that is deflected towards the receptor;

determining a first omnivergent stereo pair based at least in part on the first image and the second image.

16 ~~14~~. The apparatus of claim 15 ~~13~~, wherein both the first image and the second image are omnivergent images.

17 ~~15~~. The apparatus of claim 15 ~~13~~, QQQ:

selecting a view point; and

rendering a three dimensional imaged based at least in part on the view point and the first omvivergent stereo pair.

18 ~~16~~. The apparatus of claim 15 ~~13~~, wherein the distance is fixed.

19 ~~17~~. The apparatus of claim 15 ~~13~~, QQQ

performing the method at a first location to determine the first omnivergent stereo pair;

performing the method at a second location to determine a second omnivergent stereo pair; and

synthesizing an environment model based at least in part on the first omnivergent stereo pair and the second omnivergent stereo pair.

20 ~~18~~. The apparatus of claim 19 ~~17~~, wherein the first location is proximate to the second location.

~~19~~ 21. The apparatus of claim ~~17~~ 19, wherein a first region defined by rotating the deflector about the axis at the first location abuts a second region defined by rotating the deflector about the axis at the second location.

~~20~~ 22. The apparatus of claim ~~18~~ 15, QQQ:

receiving a configuration input; and

setting the distance with respect to the configuration input.

~~21~~ 23. The apparatus of claim ~~20~~ 22, wherein the configuration input corresponds to a desired size for a region in which a viewpoint may be selected.

~~22~~ 24. The apparatus of claim ~~21~~ 23, QQQ:

receiving a viewpoint selection; and

rendering a three dimensional image based on the viewpoint selection and the first and the second image.

~~23~~ 25. An apparatus comprising a machine accessible medium having instructions associated therewith for constructing a first image and a second image of a convergent stereo image pair, the instructions capable of directing a machine to perform:

defining a cylindrical region having an axis of rotation perpendicular to a rotation plane, the cylindrical region defined with respect to an array of sensors disposed parallel to the axis of rotation, and a prism disposed parallel to the vertical array;

determining an environment about the cylindrical region by rotating the cylindrical region through rotational positions, and while rotating:

receiving a first input at a first face of the prism for a rotational position of the cylindrical region, the first input having a first travel path tangential to the cylindrical region and corresponding to a first portion of the environment, and

receiving a second input at a second face of the prism for the rotational position of the cylindrical region, the second input having a second travel path tangential to the cylindrical region and corresponding to a second portion of the environment.

26 ~~24~~. The apparatus of claim 25 ~~23~~, the instructions comprising further instructions capable of directing a machine to perform:

storing the first input and the second input for each of plural rotational positions of the cylindrical region;

selecting a view point within the cylindrical region; and

constructing a convergent stereo image of the environment with respect to the selected view point and the stored first and second inputs for the plural rotational positions of the cylindrical region.

27 ~~25~~. The method of claim 25 ~~23~~, wherein the first travel path is opposite of the second travel path.

~~26~~. 28 The method of claim ~~23~~ 25, wherein the first and second travel paths are parallel to the rotation plane.

~~27~~. 29 An apparatus for acquiring input for a first image and a second image of a convergent stereo image pair, comprising:

a deflector rotably mounted a distance from a rotation axis, the deflector having plural deflection regions;

a receptor positioned proximate to the rotation axis, the receptor comprising a first portion of sensors and a second portion of sensors;

a first memory for storing a first input received at a first deflection region of the deflector and deflected towards the first portion of sensors; and

a second memory for storing a second input received at a second deflection region and deflected towards the second portion of sensors;

~~28~~. 30 The apparatus of claim ~~27~~ 29, further comprising:

an image constructor which determines the first image based at least in part on the first input, and the second image based at least in part on the second input.

~~29~~. 31 The apparatus of claim ~~28~~ 30, further comprising:

an interface for receiving a selected view point; and

a renderer for rendering a three dimensional imaged based at least in part on the selected view point, the first image, and the second image.

~~30~~ 32. The apparatus of claim ~~27~~ 29, wherein the deflector rotates about the rotation axis, and while rotating, subsequent first and second inputs are received, deflected, and stored in the first memory and the second memory.

~~31~~ 33. The apparatus of claim ~~27~~ 29, further comprising:

an interface for receiving a configuration input; and

setting the distance with respect to the configuration input.

~~32~~ 34. The apparatus of claim ~~31~~ 33, wherein the configuration input corresponds to a selected one of a desired depth of field for the convergent stereo image, and a desired size for a region in which a viewpoint may be selected.